Amendments to the Claims:

The listing of claims below will replace all prior versions and listings of claims in the application. The changes to currently amended claims are shown using strikethrough to identify deleted material and underlining to identify added material.

Listing of Claims:

1. (currently amended) A process for producing a conjugate comprising (a) forming a carrier on a solid phase by linking together monomeric units, and (b) introducing into the carrier at predetermined positions 1-10 additional monomeric units covalently bound to hapten molecules and 1-10 additional monomeric units covalently bound to marker groups or solid phase binding groups, whereby the conjugate comprises a minimum of 5 and a maximum of 100 monomeric units selected from the group consisting of nucleotides, peptidic nucleic acids, ~~nucleotide analogues~~ and amino acids, and wherein the hapten molecules, the marker groups, and the solid phase binding groups are bound to the carrier through a side group selected from the group consisting of amino groups, thiol groups, and a combination thereof.

2. (currently amended) A process for producing a conjugate comprising (a) forming a carrier on a solid phase by linking together monomeric units, (b) introducing into the carrier at predetermined positions additional monomeric units comprising reactive side groups and protecting groups for said side groups, (c) cleaving said protecting groups, and (d) coupling 1-10 hapten molecules and 1-10 marker groups or solid phase binding groups to said reactive side groups, whereby the conjugate comprises a minimum of 5 and a maximum of 100 monomeric units selected from the group consisting of nucleotides, peptidic nucleic acids, ~~nucleotide analogues~~ and amino acids, and wherein the hapten molecules, the marker groups, and the solid phase binding groups are bound to the carrier through a side group selected from the group consisting of amino groups, thiol groups, and a combination thereof.

3. (original) The process as claimed in claim 1, wherein the monomeric units are amino acids.

4. (original) The process as claimed in claim 2, wherein the monomeric units are amino acids and 2-10 hapten molecules are coupled in step (d).

5. (original) The process as claimed in claim 1, wherein the monomeric units covalently bound to hapten molecules and the monomeric units covalently bound to marker groups or solid phase binding groups are bound via primary amino groups or thiol groups.

6. (previously amended) The process as claimed in claim 2, wherein the reactive side groups are primary amino groups and the protective groups are selectively cleavable.

7. (original) The process as claimed in claim 6, wherein the protective groups are selected from the group consisting of acid-labile groups and acid-stable groups.

8. (currently amended) A process for producing a conjugate comprising

(a) forming a carrier on a solid phase by linking together monomeric units,

(b) introducing into the carrier at predetermined positions ~~1–10~~ additional monomeric units covalently bound to hapten molecules and ~~1–10~~ additional monomeric units covalently bound to marker groups or solid phase binding groups, and

(c) introducing into the carrier at predetermined positions additional monomeric units comprising reactive side groups and protecting groups for said side groups, cleaving said protecting groups, and coupling ~~1–10~~ hapten molecules and ~~1–10~~ marker groups or solid phase binding groups to said reactive side groups,

~~whereby~~ wherein the conjugate comprises a minimum of 5 and a maximum of 100 monomeric units selected from the group consisting of nucleotides, peptidic nucleic acids, ~~nucleotide analogues~~ and amino acids; 1-10 hapten molecules; and 1-10 marker groups or solid phase binding groups; and

wherein the hapten molecules, the marker groups, and the solid phase binding groups are bound to the carrier through a side group selected from the group consisting of amino groups, thiol groups, and a combination thereof.

9. (new) The process of claim 8 wherein the hapten molecules are selected from the group consisting of immunological reactive molecules having a molecular mass of 100 to 2000 Da, immunologically reactive peptide epitopes having a length of up to 30 amino acids, nucleic acids with a length of up to 50 nucleotides, peptidic nucleic acids with a length of up to 50 monomeric units, and combinations thereof.

10. (new) The process of claim 1 wherein the hapten molecules are selected from the group consisting of immunologically reactive molecules having a molecular mass of 100 to 2000 Da, immunologically reactive peptide epitopes having a length of up to 30 amino acids, nucleic acids with a length of up to 50 nucleotides, peptidic nucleic acids with a length of up to 50 monomeric units, and combinations thereof.

11. (new) The process of claim 2 wherein the hapten molecules are selected from the group consisting of immunological reactive molecules having a molecular mass of 100 to 2000 Da, immunologically reactive peptide epitopes having a length of up to 30 amino acids, nucleic acids with a length of up to 50 nucleotides, peptidic nucleic acids with a length of up to 50 monomeric units, and combinations thereof.

12. (new) The process as claimed in claim 1, wherein the hapten molecules are selected from the group consisting of antibiotics, opiates, amphetamines, barbiturates, cytostatic agents, paracetamol, salicylates, phenytoin, quinine, quinine derivatives, theophyllin, hormones, metabolites, bile acids, sexual hormones, corticoids, cardenolides, cardenolide-glycosides, steroid-sapogenines, steroid alkaloids, peptide hormones, creatinine, thyroid hormones, neurotransmitters, vitamins, mediators, and combinations thereof.

13. (new) The process as claimed in claim 12, wherein the cytostatic agents are selected from the group consisting of gentamicin, tobramycin, vancomycin, and combinations thereof; wherein the hormones are sterols; wherein the sexual hormones are selected from the group consisting of estradiol, estriol, testosterone, progesterone, pregnenolone, estradiol derivatives, estriol derivatives, testosterone derivatives, progesterone derivatives, pregnenolone derivatives, and combinations thereof; wherein the corticoids are selected from the group consisting of cortisol, corticosterone, cortisone, cortisol derivatives, corticosterone derivatives, cortisone derivatives, and combinations thereof; wherein the cardenolide-glycosides are selected from the group consisting of digoxin, digoxigenin, strophanthin, bufadienolides, and combinations thereof; wherein the thyroid hormones are selected from the group consisting of T_3, T_4, and a combination thereof; wherein the neurotransmitters are selected from the group consisting of serotonin, choline, γ-aminobutyric acid, and combinations thereof; and wherein the mediators are selected from the group consisting of prostaglandins, leucotrienes, leucoendiines, thromboxanes, and combinations thereof.

14. (new) The process as claimed in claim 10, wherein the immunologically reactive peptide epitopes having a length of up to 30 amino acids are derived from (a) a pathogenic organism selected from the group consisting of bacteria, viruses, protozoa, and combinations thereof; or (b) autoimmune antigens.

15. (new) The process as claimed in claim 14, wherein the immunologically reactive peptide epitopes having a length of up to 30 amino acids are derived from a viral antigen selected from the group consisting of the amino acid sequence of HIV I, the amino acid sequence of HIV II, the hepatitits C virus, and combinations thereof.

16. (new) The process as claimed in claim 1, wherein the marker groups are selected from the group consisting of luminescent metal chelates, fluorescent labels, and a combination thereof.

17. (new) The process as claimed in claim 1, wherein the solid phase binding groups are selected from the group consisting of biotin, biotin analogues, and a combination thereof.

18. (new) The process as claimed in claim 17, wherein the biotin analogues are selected from the group consisting of desthiobiotin, iminobiotin, and a combination thereof.

19. (new) The process as claimed in claim 2, wherein the hapten molecules are selected from the group consisting of antibiotics, opiates, amphetamines, barbiturates, cytostatic agents, paracetamol, salicylates, phenytoin, quinine, quinine derivatives, theophyllin, hormones, metabolites, bile acids, sexual hormones, corticoids, cardenolides, cardenolide-glycosides, steroid-sapogenines, steroid alkaloids, peptide hormones, creatinine, thyroid hormones, neurotransmitters, vitamins, mediators, and combinations thereof.

20. (new) The process as claimed in claim 19, wherein the cytostatic agents are selected from the group consisting of gentamicin, tobramycin, vancomycin, and combinations thereof; wherein the hormones are sterols; wherein the sexual hormones are selected from the group consisting of estradiol, estriol, testosterone, progesterone, pregnenolone, estradiol derivatives, estriol derivatives, testosterone derivatives, progesterone derivatives, pregnenolone derivatives, and combinations thereof; wherein the corticoids are selected from the group consisting of cortisol, corticosterone, cortisone, cortisol derivatives, corticosterone derivatives, cortisone derivatives, and combinations thereof; wherein the cardenolide-glycosides are selected from the group consisting of digoxin, digoxigenin, strophanthin, bufadienolides, and combinations thereof; wherein the thyroid hormones are selected from the group consisting of T_3, T_4, and a combination thereof; wherein the neurotransmitters are selected from the group consisting of serotonin, choline, γ-aminobutyric acid, and combinations thereof; and wherein the mediators are selected from the group consisting of prostaglandins, leucotrienes, leucoendiines, thromboxanes, and combinations thereof.

21. (new) The process as claimed in claim 11, wherein the immunologically reactive peptide epitopes having a length of up to 30 amino acids are derived from (a) a pathogenic organism selected from the group consisting of bacteria, viruses, protozoa, and combinations thereof; or (b) autoimmune antigens.

22. (new) The process as claimed in claim 21, wherein the immunologically reactive peptide epitopes having a length of up to 30 amino acids are derived from a viral antigen selected from the group consisting of the amino acid sequence of HIV I, the amino acid sequence of HIV II, the hepatitits C virus, and combinations thereof.

23. (new) The process as claimed in claim 2, wherein the marker groups are selected from the group consisting of luminescent metal chelates, fluorescent labels, and a combination thereof.

24. (new) The process as claimed in claim 2, wherein the solid phase binding groups are selected from the group consisting of biotin, biotin analogues, and a combination thereof.

25. (new) The process as claimed in claim 24, wherein the biotin analogues are selected from the group consisting of desthiobiotin, iminobiotin, and a combination thereof.

26. (new) The process as claimed in claim 8, wherein the hapten molecules are selected from the group consisting of antibiotics, opiates, amphetamines, barbiturates, cytostatic agents, paracetamol, salicylates, phenytoin, quinine, quinine derivatives, theophyllin, hormones, metabolites, bile acids, sexual hormones, corticoids, cardenolides, cardenolide-glycosides, steroid-sapogenines, steroid alkaloids, peptide hormones, creatinine, thyroid hormones, neurotransmitters, vitamins, mediators, and combinations thereof.

27. (new) The process as claimed in claim 26, wherein the cytostatic agents are selected from the group consisting of gentamicin, tobramycin, vancomycin, and combinations thereof; wherein the hormones are sterols; wherein the sexual hormones are selected from the group consisting of estradiol, estriol, testosterone, progesterone, pregnenolone, estradiol derivatives, estriol derivatives, testosterone derivatives, progesterone derivatives, pregnenolone derivatives, and combinations thereof; wherein the corticoids are selected from the group consisting of cortisol, corticosterone, cortisone, cortisol derivatives, corticosterone derivatives, cortisone derivatives, and combinations thereof; wherein the cardenolide-glycosides are selected from the group consisting of digoxin, digoxigenin, strophanthin, bufadienolides, and combinations thereof; wherein the thyroid hormones are selected from the group consisting of T_3, T_4, and a combination thereof; wherein the neurotransmitters are selected from the group consisting of serotonin, choline, γ-aminobutyric acid, and combinations thereof; and wherein the mediators are selected from the group consisting of prostaglandins, leucotrienes, leucoendiines, thromboxanes, and combinations thereof.

28. (new) The process as claimed in claim 9, wherein the immunologically reactive peptide epitopes having a length of up to 30 amino acids are derived from (a) a pathogenic organism selected from the group consisting of bacteria, viruses, protozoa, and combinations thereof; or (b) autoimmune antigens.

29. (new) The process as claimed in claim 28, wherein the immunologically reactive peptide epitopes having a length of up to 30 amino acids are derived from a viral antigen selected from the group consisting of the amino acid sequence of HIV I, the amino acid sequence of HIV II, the hepatitits C virus, and combinations thereof.

30. (new) The process as claimed in claim 8, wherein the marker groups are selected from the group consisting of luminescent metal chelates, fluorescent labels, and a combination thereof.

31. (new) The process as claimed in claim 8, wherein the solid phase binding groups are selected from the group consisting of biotin, biotin analogues, and a combination thereof.

32. (new) The process as claimed in claim 31, wherein the biotin analogues are selected from the group consisting of desthiobiotin, iminobiotin, and a combination thereof.

SUPPORT FOR AMENDMENT

New dependent claims 9-32 and the amendments to original independent claims 1, 2, and 8 are fully supported by the description in the specification as filed (e.g., page 5, lines 22-27; page 6, lines 29-32; page 7, lines 7-23; page 7, line 31 to page 9, line 8; page 9, lines 10-16). No new matter has been added. Upon entry of this Response, claims 1-32 are present and active in the application.